



# NEXRAD Product Improvement



## Technical Advisory Committee

### NEXRAD Product Improvement Program Status

OS&T  
March 2007





# ORDA



- 
- ORDA Deployment Completed
  - Residual Actions being completed
  - Contract conclusion – March 30



# Dual Polarization



- DOC Buy-in Using GSA Government-Wide Acquisition Contract (GWAC) Millennium Lite
  - Contracting Officer and staff located in Oklahoma City Federal Building
  - Streamlines acquisition process
  - Compete among pre-qualified vendors
  - Approval by Commerce CITRB and NOAA Acquisitions
  - MOA Imminent
  - Use performance-based statement of objectives
  - Award on best value considering technical, past performance and price



# Dual Polarization



- Infrastructure Upgrade Estimate
  - Archiving (National Climactic Data Center estimate)
    - \$150K one-time costs for load balancing server and data storage upgrades (NPI PAC budget)
    - \$100K/year for communication costs and archive tapes (NEXRAD O&M budget)
  - RDA to RPG communications
    - NWS study: existing RDA-RPG links sufficient
  - RPG to national users communications (Level II)
    - <\$50K for one-time cost for communications upgrades (NPI PAC budget)
    - \$260K/year for RPG-NWSnet bandwidth increase (NEXRAD O&M budget)



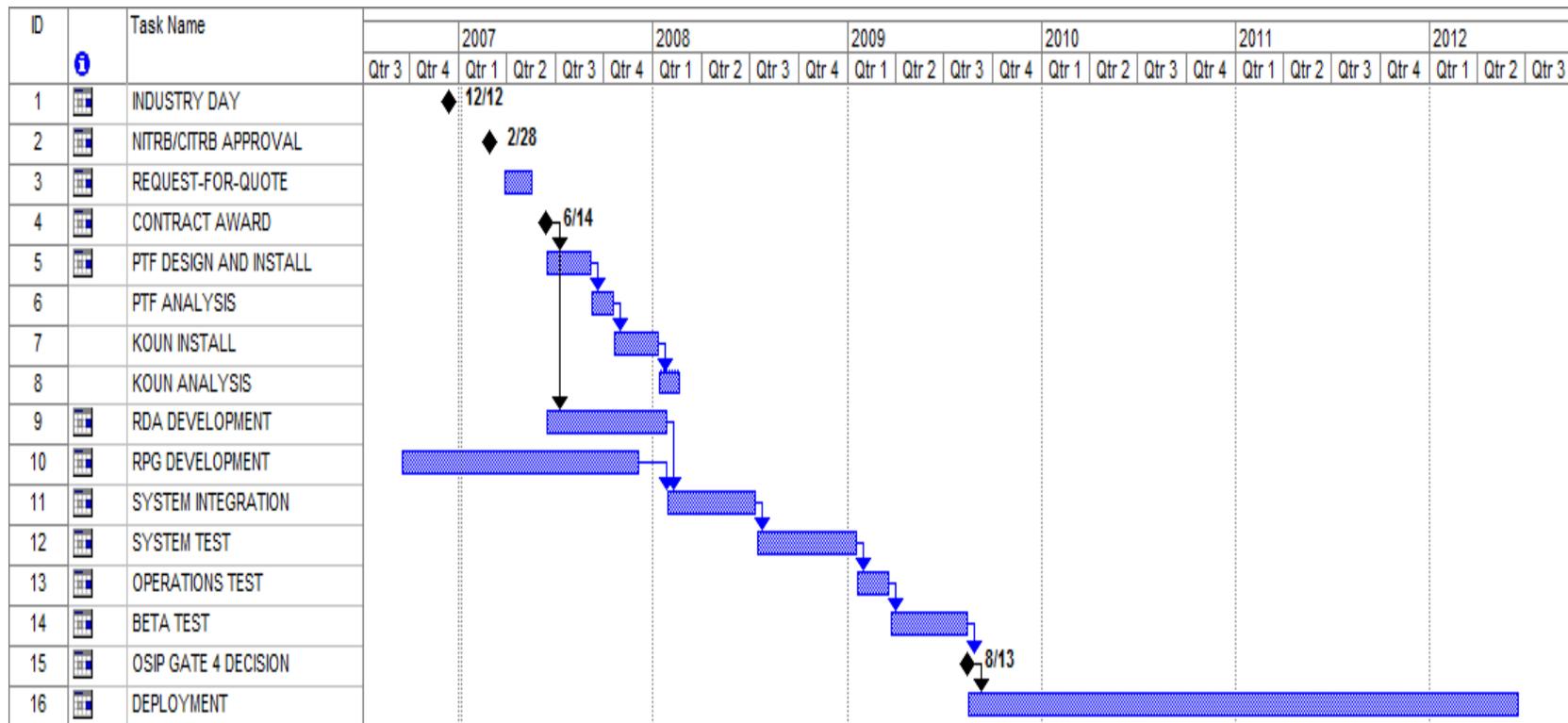
# Dual Polarization



ACQUISITION SCHEDULE	
Date	Milestone
12/15/06	Industry Day
01/09/07	NITRB
02/28/07	CITRB
03/9/07	Obtain Delegation of Procurement Authority
03/9/07	Obtain Solicitation Reviews and Clearances (e.g., legal)
03/26/07	Issue Solicitation
04/24/07	Receive Proposals
05/18/07	Complete Proposal Evaluation
05/25/07	Source Selection
06/21/07	Contract Award



# Dual Polarization





# Dual Polarization



- Other Key Activities
  - RPG Algorithm Development
    - Utilize:
      - NSSL QPE and HCA R&A versions
      - RDA/RPG Interface Control Document
      - Updated NEXRAD System Specification
  - OS&T validate and implement the HCA algorithm
  - OHD validate and implement the QPE algorithm
  - ROC implement preprocessor/infrastructure and integrate HCA and QPE
  - Determine interrelationship of other new features (e.g. Super-res)

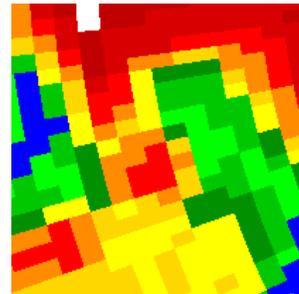


# SUPER-RESOLUTION

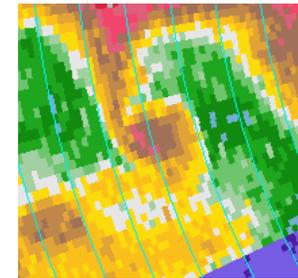


- Implementation consistent with TAC recommendation
- Current indications are adequate processor and wideband comms capacity
  - Evaluating narrowband impact
- Targeted for Build 10 (early 2008)

## *Improve Angular and Range Resolution* Better Detail on Structure of Tornadoes



Current Reflectivity: 1.00 x 1.0 km



ORDA Reflectivity: 0.50 x 0.25 km  
(Hook-echo clearly visible)



# TDWR



- Ten units currently deployed, supported by OS&T
- NOAA Mandate to deploy remaining 35 systems by end of FY08
  - OS&T will contract for:
    - implementation
    - preparation for support management responsibility transfer to the ROC in FY09
  - Establishing Change Management Process



# Joint Radar Planning Team



## Began with...

- Kevin Kelleher OAR-NSSL/Co-Lead
- Daniel Meléndez NWS-OST/Co-Lead
- Bob Saffle NWS-OST
- Tim Schneider OAR-ESRL

## Added...

- Dusan Zrnic OAR-NSSL
- Tim Crum NWS-ROC
- Greg Cate NWS-OST
- Lou Wicker OAR-NSSL
- John Ferree NWS
- Sreela Nandi NWS
- Mark Weadon OFCM
- Itinerant Experts (e.g., Mark Yeary/OU)

***Establish Vision for Integrated National Weather Radar System***